WEATHER

1. 1996 Q 4 (Section A)

a) If the local time in Nairobi at longitude 37^{o} E is 10.00 a.m .What will the time be at Buchanan in Liberia at longitude 10^{o}W

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b) What is the effect of the International Date Line on time? (2 marks)

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2. 1997 Q 5

a) Differentiate between weather and climate (2 marks)

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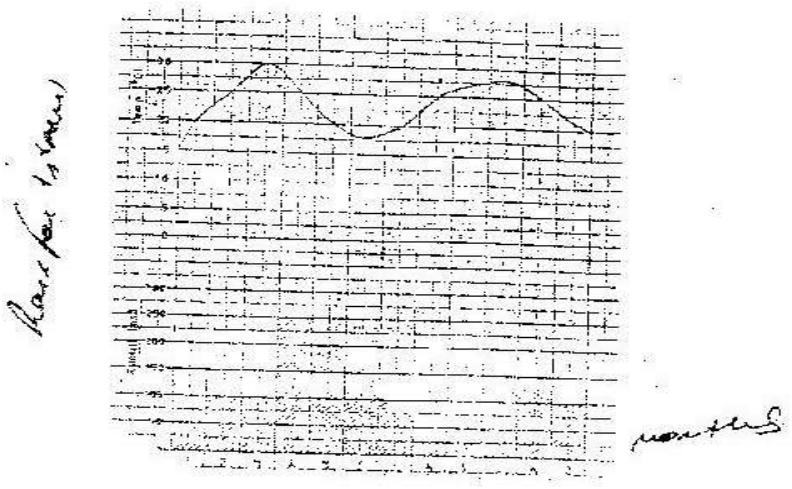
b) The graph below shows climatic characteristics of a station in Kenya. Use it to answer the following questions.



i) Calculate the annual range temperature. (1 mark)

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ii) Calculate the total amount of rainfall received at the station (1 mark)

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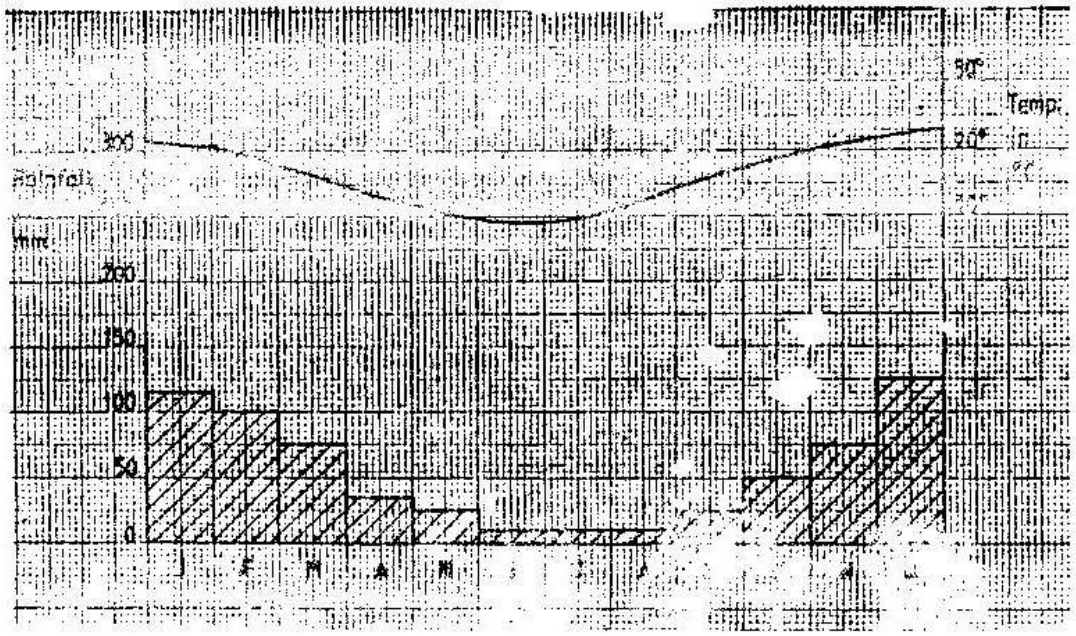
3. 1998 Q 8a

The graph below represents the climate of a station in Africa. Use it to answer question



a) (i) Describe the characteristics of the climate represented by the graph

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(ii) Describe the type of natural vegetation likely to be found in an area with the type of climate represented by the graph.

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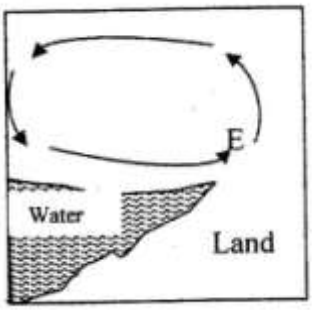
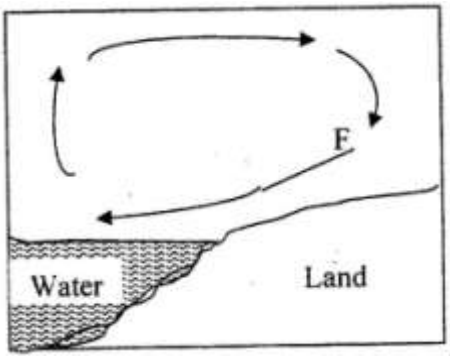
4. 1999 Q3

The diagram below represents the flow of air current. Use them to answer question





(a) (i) In your answer booklet, name the air current marked E

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(ii) Why does the air cool as it rises?

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5. 2000 Q 1

(a) Name two elements of weather that can be recorded at a school weather station

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(b) Give three reasons why the recording of data at a school weather station may be inaccurate

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6. 2000 Q 8a, b

(a) State three characteristics of the inter-tropical convergence zone

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(b) With the aid of a labelled diagram, describe how relief rainfall is formed

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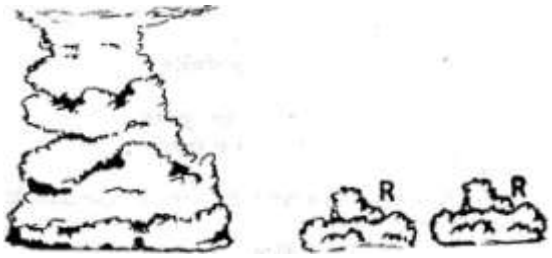
7. 2001 Q 2

(a) State two conditions that are necessary for the formation of fog.

(b) The diagram below shows some types of clouds. Use it to answer the questions that follow.



(i) Name the clouds marked R

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(ii) Give two weather conditions associated with cumulonimbus clouds

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8. 2002 Q 4

a) The table below shows climatic data of a station in Kenya. Use it to answer question(a)

Month	Jan	Feb	Mar	April	May	June	Jul	Aug	Sep	Oct	Nov	Dec
Temp in ^{o}C	28.9	29.7	30.3	29.9	29.7	29.2	28.4	28.7	29.6	30.1	29.2	28.7
Rainfall in mm	9.0	8.0	21.0	49.0	25.0	9.0	20.0	10.0	4.0	10.0	17.0	11.0

i) What is the annual range of temperature at the station?

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ii) Calculate the total rainfall for the station.

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b) State three factors that influence climate.

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9. 2003 Q 8

a) The tables below represent rainfall and temperature of stations X and Y.
Use them to answer questions (a) and (b)

MONTHS	J	F	M	A	M	J	J	A	S	O	N	D
TEMPERATURE IN ^{0c}	30	31	31	31	30	29	29	28	28	29	29	30
RAINFALL IN MM	250	250	325	300	213	25	25	25	100	275	380	200

MONTHS	J	F	M	A	M	J	J	A	S	O	N	O
TEMPERATURE IN ^{0}C	21	20	20	17	15	13	12	13	15	16	18	20
RAINFALL IN MM	12	12	15	50	90	110	87	87	50	35	20	15

a) (i) For each of the two stations calculate the mean annual temperature.

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Y -

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(ii) Calculate the annual rainfall for station Y

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(iii) On the graph paper provided, draw a bar graph to represent rainfall for station x. Use vertical scale of 1cm to represent 50mm

b) Describe the climatic characteristics of station Y.

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c) (i) Describe how conventional rainfall is formed in the lake region of Kenya

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10. 2004 Q 2

a) What is latitude?

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b) What is the time at Hola on 40^0 E when the time at Tema on 0^0 longitude is 12.00 noon?

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11. 2004 Q 4

a) What do you understand by:

(i) Microclimate?

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(ii) Green house effect?

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b) Name three instruments to match three elements of weather that can be measured at a school weather station (3 marks)

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12. 2005 Q 9d.

(i) Describe a suitable site where you would locate a weather station in your school (2 marks)

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(ii) Give reasons why a Stevenson's screen is:

- Painted White (2 marks)

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- Has louvers (2 marks)

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13. 2006 Q 1

(a) How does a sea breeze occur? (2 marks)

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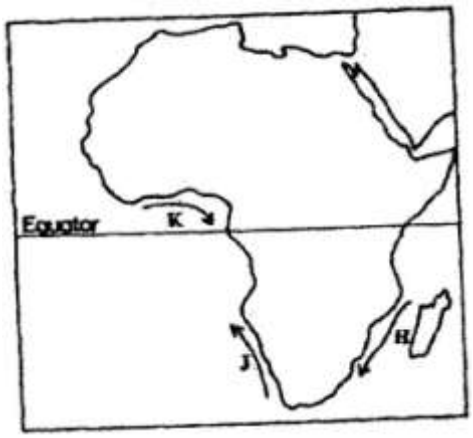
(b) Use the map of Africa below to answer questions (b) (i)



(i) Name the ocean currents marked H, J, and K (3 marks)

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(ii) State two effects of a warm ocean current on the adjacent coastlands (2 marks)

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14. 2006 Q 5

The table below represents rainfall and temperature figures for a town in Africa. Use it to answer the questions that follow

Month	J	F	M	A	M	J	J	A	S	O	N	D
Temp (^{0}C)	27	28	28	28	27	25	25	24	25	26	27	26
Rainfall (mm)	25	38	99	140	277	439	277	69	142	201	71	25

(a) (i) calculate the annual range of temperature for the town (1 mark)

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15. 2007 Q 8a, b

(a) (i) What is climate? (2 marks)

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(ii) Explain two effects of climate change on the physical environment (4 marks)

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(b) The table below shows rainfall and temperature figures of station in Africa

Month	J	F	M	A	M	J	J	A	S	O	N	D
Temp in ^{0}C	24	24	23	22	19	17	17	18	19	20	22	23
Rainfall in mm	109	122	130	76	52	34	28	38	70	108	121	120

(i) On the graph paper provided, draw a bar graph to represent the rainfall figure. Use a vertical scale of 1 cm to represent 10mm) (5 marks)

(ii) Describe the rainfall pattern of the station (4 marks)

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(iii) Calculate the average monthly temperature for the station (Show your calculations) (2 marks)

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16. 2008 Q 2b

The table below shows temperature readings at a weather station for one week.

Temp/Day	Mon	Tue	Wed	Thur	Fri	Sat	Sun
Max ^{0}c	28	27	28	26	29	29	26
Min ^{0}c	18	18	20	16	22	21	19

Calculate the following:

i) The diurnal range of temperature for Tuesday; (1 mark)

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ii) The mean temperature for Saturday. (1 mark)

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17. 2008 Q 4

a) Apart from water vapour, name two other substances that are suspended in the atmosphere. (2 marks)

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b) i) Give two factors that are considered when classifying clouds. (2 marks)

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ii) Name two types of clouds that give rise to rainfall in the tropical regions. (2 marks)

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18. 2009 Q 3

(a) What is a line of longitude (2 marks)

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(b) What is the local time at Alexandria30^0 E when the local time at Malindi 40^0 E is 12.00 noon? (2 marks)

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19. 2009 Q 4

(a) Outline the steps followed when measuring humidity using a hygrometer. (3 marks)

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(b) Give two factors that influence relative humidity (2 marks)

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20. 2011 Q 7

a) i) State three conditions that are necessary for siting a weather station. (3 marks)

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ii) Give four reasons why weather forecasting is important. (4 marks)

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b) The table below shows the temperature and rainfall figures for a weather station in Kenya. Use it to answer question (b) and (c).

Month	J	F	M	A	M	J	J	A	S	O	N	D
Mean monthly temperature in ^{0}c	16.2	16.5	17.1	17.1	16.1	15.2	15.2	15.0	16.0	16.1	16.1	16.3
Rainfall 2125 mm	100	104	175	232	323	218	196	231	196	152	127	71

Source: Kenya Meteorological Department

Calculate:

(i) The mean annual temperature for the station. (2 marks)

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(ii) The annual range of temperature for the station. (2 marks)

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(c) (i) On the graph paper provided, draw a bar graph to represent the rainfall figures for the station. Use a vertical scale of 1 cm to represent 20 mm (5 marks)

ii) Describe the characteristics of the climate experienced at the weather station. (3 marks)

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21. 2012 Q3 P2

a) Name two forms of precipitation that commonly occur in Kenya (2 marks)

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b) What is a Stevenson's screen?

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